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EPILEPSY AS SEEN IN THE LABORATORY OF A PENAL INSTITUTION¹

JOHN R. HARDING²

In the preparation of this brief outline the writer has confined himself to the use of material studied in the laboratory of the Elmira Reformatory during the past twelve months.

The psychological laboratory emphasizes the personal side of the criminal. It grades his mentality through the use of intelligence tests and thus determines his degree of efficiency. It also tabulates the *kind*, or quality, of his mental departures and so affords a valuable cross-reference study of the case. Furthermore, it penetrates into the sub-conscious and analyzes the character and personality of the individual at close range.

This method has given us a new and interesting view of the "epilepsies." Students of this mysterious disease type have long quibbled over its actual causation. Some of them still adhere tenaciously to the theory that organic brain changes are always present, but cite no constant lesion to substantiate their claim; others believe that the presence of a toxin in the blood is the actual cause of the trouble, and Reed has discovered an organism in the blood of epileptics which he claims is not found in that of other individuals and to which he attributes specific qualities. Another contingent insists that we are dealing with a neurosis closely simulating the "hysterias." An enthusiastic advocate of this particular hypothesis has recently declared that there are no epilepsies, but that we are dealing with a distinct type of nervous susceptibility, and that the manifestations by which we diagnose epilepsy are only the natural resultants of irritation on this particular type of nervous system. Clark of the Freudian School declares with startling audacity that epilepsy is due to the unconscious striving for expression of certain arrested and immature sex emotions.

But in spite of the long and diligent search for a specific lesion, and the many hypotheses offered, none has yet been found. There are no recognized pathognomonic signs of epilepsy today. Less than one-half of Clark's twenty-five selected cases of true epilepsy revealed

¹Read at the Annual Convention of the American Prison Association, New Orleans, November 19, 1917.

²Resident Physician, State Reformatory, Elmira, N. Y.

any evidence of gross or microscopic pathology. As Spratling has so aptly said, "Epilepsy is the most protean, variable and uncertain of all maladies." It takes possession of the personality and stamps it with its own image; it interrupts consciousness, convulses the body, saps the intelligence and perverts the will. Its victim is a source of fear and shame to his relatives, and usually an outcast from society. What is this monster malady that has defied the best diagnostic efforts of the profession for twenty-five centuries, and is still untamed? And why have we thus failed, unless it is because we have looked too steadily at the convulsive phenomena while passing over the personal make-up of the individual and ignoring the psychological meaning of his symptoms?

The writer of this paper believes with Gowers and many other able authorities on the subject that epileptic phenomena are the direct outcome of some physical or psychic irritant acting upon an unstable nervous system, which in turn is susceptible to convulsive manifestations; that this susceptibility resides largely in the cells of the motor and intellectual areas of the cerebral cortex; also, that the disease is always the result of a vicious heredity. As Spratling has said, "Heredity is the supreme agency to which the disease could possibly be ascribed."

Thus it is that the laboratory, through its study of the personality and the life history of the individual, is uncovering the heretofore hidden character of this strange disease complex. In fact, the combined forces of biology and psychology have triumphed where those of pathology had so long striven in vain.

CROSS-REFERENCE SUMMARY OF FORTY-FOUR EPILEPTIC DIAGNOSES MADE AT THE ELMIRA REFORMATORY, 1916-1917.

Epileptic Types		Grades Sub- normal	of Efficiency Segre- gable	Total
Motor Seizures—				
Major Motor Epilepsy.....	..		3	
Minor Motor Epilepsy.....	7		3	
	—		— 13, or	29%
Sensory Seizures—				
True Sensory Epilepsy.....	9		..	
Masked Sensory Epilepsy.....	10		3	
	—		— 22, or	50%
Psychic Seizures—				
Psychic Accessions	1		..	
Psychic Equivalents	4		4	
	—		— 9, or	21%
				44, or 100%

The above summary was compiled from a study of 400 consecutive cases recently made at the Elmira Reformatory. As will be readily seen, these 44 cases represent 11% of the entire number examined. As previously noted, psychoanalysis reveals the true nature of many formerly obscure and poorly understood examples of epilepsy, and it is evident that our classification must now be extended so as to include these out-of-the-way members of this family group.

The cross-section used here is a simplified modification of the Fischbein classification of epilepsy, based upon its clinical symptomatology. The time-honored division into major, or greater, and minor, or lesser, epilepsy, must go, since these terms were in reality descriptive of appearances rather than of actual conditions. Thorough investigation has convinced us with Esquirol that even a "transient epileptic vertigo is often more damaging to the intellect than the far more violent and formidable grand mal seizures."

The above classification recognizes three main types of seizure, namely, Motor, Sensory, and Psychic seizures. The Motor type is subdivided into a Major and a Minor form, according to the amount of muscular spasm.

Major Motor Epilepsy is the classic and full-fledged manifestation of the disease generally recognized as the common "epileptic fit." The seizure is usually of short duration, but leaves a varying display of sensory or psychic symptoms in its wake.

Minor Motor Epilepsy includes "running" epilepsy, also the so-called Jacksonian type, and differs from the Major form in degree rather than in kind.

The Sensory seizures are conveniently divided into either the true or the masked forms.

True Sensory Epilepsy, including much of the common petit mal, is also of sudden onset and short duration. It displays little or no spasm and is attended by a periodic and transitory lapse of consciousness without falling.

Masked Sensory Epilepsy is characterized more particularly by the presence of modified sensory symptoms, such as vertigo, headache, or precordial distress. The consciousness is not always fully eclipsed in these cases, but the symptoms are usually more prolonged and deep-seated than in the preceding forms.

The Psychic seizures, as implied by the title, are characterized by the appearance of strange and sudden mental phenomena of epileptic origin. These episodes may appear before or after a regular motor seizure, or as equivalents to the latter.

Psychic Accessions express themselves as mixed hallucinations, uncontrollable impulses, emotional variations, etc. The epileptic insanities naturally come under this type, also many of the criminal obsessions among epileptics.

Psychic Equivalents include the more passive and deep-seated mental phenomena of epileptic origin, such as dream states, dual personalities, and ambulatory automatisms. This form generally alternates with other types of the disease, and is, therefore, more of a supplementary type.

But, as previously noted, the epilepsies are strangely variable and uncertain in their manifestations. They follow no set rules and frequently come to the surface in new and unexpected combinations.

While our classification must necessarily deal with the attack itself, let us bear in mind that there are other kinds of convulsions not unlike those of the motor epilepsies, also that the sensory and psychic epilepsies may be closely simulated by some of the benign neuroses. Our diagnosis, then, can best be made from a close study of the individual himself during the interval between attacks. In fact, the presence of the so-called "epileptic character" must ever be our diagnostic guide.

The epileptic is chronically nervous. The keynote to his character is emotional irritability. His varying moods change most unexpectedly, and he is actuated by quick, unreasoning impulse in much that he does. The epileptic shows a woeful disregard for consequences. He lacks foresight and planning ability, and pursues his irregular activities openly and boldly. He also has a violent, uncontrollable temper, and is usually jealous, suspicious and fault-finding in his dealings with others. Often he develops hatred, and assumes a persecutory attitude towards those with whom he is associated. In some cases fear is a prominent symptom, especially just preceding the attack. Some are cunning and treacherous, and inclined to trump up false charges against innocent people. These ideas against family and friends may temporarily pass into real delusions and thus lead to criminal acts.

All epileptics are egotistic and self-centered. Sometimes this takes the form of self-pity and of a wholesale distrust of others, and thus leads to the "shut-in" personality; these are the moody and melancholy cases which keep themselves in the background, and try to cover their symptoms. Other egocentrics are of a selfish, unethical type, who perpetually ignore and trample on the rights and feelings of others.

The volitional sphere of epileptics often suffers radical changes. While obstinate and uncompromising towards others, they are often strangely weak-willed and suggestible. Morally these individuals are apt to be spineless or perverted. They lack inhibitory force, and are frequently given to gluttony and debauchery. Many of them are over-sexed, especially during the heat of emotional stress just preceding an attack. In general, as the higher mental attributes become dulled or effaced the animal instincts rise to the ascendancy. We are here reminded of Lombroso's unique description of the epileptic personality, and of his strong contention that all crime is in some way related to the epilepsies. While recognizing a frequent relationship between crime and epilepsy the writer of this paper believes that epilepsy is only one of several types of criminal potentiality.

As a rule, the epileptic is ashamed of his malady and tries to conceal it. From this fact we have occasionally been enabled to distinguish atypical cases of epilepsy from the hysterias. This tendency towards subterfuge may also account for some of the unrecognized cases in our institutions.

The epileptic psyche is always a restless and changeable entity. While the character defects just enumerated are usually intensified for varying periods immediately before or after the seizure, an unstable temperament is always in evidence. These individuals are essentially degenerate, and unable to adapt themselves to the requirements of a normal, social life. The defect is primal and, in a broad sense due to a perversion of the varying attributes of the psyche itself, and is not to be confounded with the arrests of intellectual development found in the feeble-minded, or with the deterioration due to the destructive influence of the attack itself.

The technique of our laboratory examinations has included (1) a careful physical examination, together with a Wasserman blood test; (2) a general intelligence rating according to the Binet-Simon measuring scale, in conjunction with some of the Healy mental tests; (3) a psychological examination; (4) a careful study of the inmate's personal and ancestral histories.

The leading physical defects noted were irritable, rapid hearts, nutritional disorders, and wide variations in the reflexes. Almost without exception those examined suffered more or less from constipation. The sexual organs were often oversized, and pigmented from masturbation and venery.

As pointed out by Goddard, those who are either primarily epileptic or acquire the disease in early life may deteriorate rather rap-

idly. They answer part of the test questions for different years correctly, but miss some questions in all of the year tests, thus showing a scattering of the intellectual defects. This would indicate that epilepsy involves certain attributes of the intellect, while leaving others more or less intact. Most cases give varying responses to the same tests at different sittings. The morons and psychopaths of low grade who acquire the milder forms of epilepsy apparently do not deteriorate rapidly. They also respond more uniformly to the intelligence tests up to the limit of their intellectual development.

Biologically the epileptic may be looked upon as a monstrosity in which the variations and defects of several generations of ancestors have combined to produce a strange and perverted type of individual. It does not often happen that the epileptic is the son of an epileptic; but his family tree has invariably produced many other atypical offshoots, and all too frequently the parental blood has been vitiated by the presence of alcoholic, syphilitic or tuberculous poisons.

This outline would scarcely be complete without a differential reference to the so-called "benign epilepsies." These cases often closely simulate the real sensory seizures, but seldom suffer from motor symptoms aside from palpitation or a sense of a general weakness; neither do they display the epileptic temperament, nor show deterioration. These episodes occur in a certain class of neuropathic degenerates, who become dizzy or confused when angry or embarrassed, or when trying to concentrate the gaze or attention. Roaring sensations and a hallucinatory play of bright colors are frequently experienced during these attacks, also more or less cerebral congestion and subsequent headaches and apathy for varying lengths of time. These individuals are found more particularly among the lower grades of intelligence, and are to be differentiated from true epileptics.

REITERATION

(1) Epilepsy is a distinct neurosis, characterized by the twin manifestation of impaired consciousness and impaired motor co-ordination, combined with a perverted personality and excited by a specific irritation.

(2) The psychological laboratory, through its study of the character and personality of the individual, in conjunction with a careful intelligence grading, has shed a new light upon the epilepsies.

(3) After twenty-five centuries of diligent search for an etiological lesion, we are now convinced that there are no strictly pathog-

nomonic signs of epilepsy, but that the seizure is due to the specific action of some irritant upon a susceptible nervous system.

(4) That for practical laboratory purposes we may conveniently classify according to clinical symptoms instead of the outward appearance of the seizure.

(5) The so-called epileptic character should be our center of the interest and our diagnostic guide-post in every case.

(6) The epileptic temperament is always unsocial and potentially criminal.

(7) Biologic and psychologic methods offer the only practical approach to a comprehensive understanding of the disease.